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PN - JP10132561 A 19980522  
TI - SURVEYING EQUIPMENT HAVING AF FUNCTION  
FI - G01C5/00&T ; G01C3/06&P ; G03B3/00&A ; G02B7/11&B ; G03B13/20  
PA - ASAHI SEIMITSU KK  
IN - KOJIMA YOICHI;SUZUKI SHINICHI; TAKAYAMA MOCHIYUME  
AP - JP19960283675 19961025  
PR - JP19960283675 19961025  
DT - I

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AN - 1998-351266 [31]  
TI - Optical wave range finder with automatic focussing function - includes a focus-lens drive unit which drives focus lens system based on detected focal condition in conjugate surface of focal board  
AB - JP10132561 The device has a polo prism (33), a focal lens system (31), an erect optical system, a focal board (35) and an eye piece system (37), which are arranged sequentially from the object side. An optical division element (34) is stuck to the transmission surface of the polo-prism, for dividing it into several transmission surfaces.  
- The division beam divided by the optical division element is drawn ahead from the polo prism by a reflecting element. An AF sensor detects the focal condition in a conjugate surface (35C) of the focal board. A focus lens drive unit (27) drives the focus lens system depending on the output of the AF sensor.  
- ADVANTAGE - Reduces size of branch optical system. Simplifies structure.  
- (Dwg.1/19)  
IW - OPTICAL WAVE RANGE FINDER AUTOMATIC FOCUS FUNCTION FOCUS LENS DRIVE UNIT DRIVE FOCUS LENS SYSTEM BASED DETECT FOCUS CONDITION CONJUGATE SURFACE FOCUS BOARD  
PN - JP3154047B2 B2 20010409 DW200122 G01C3/06 008pp  
- JP10132561 A 19980522 DW199831 G01C3/06 008pp  
- US5936736 A 19990810 DW199938 G01B11/14 000pp  
IC - G01B11/14 ;G01C3/06 ;G01C5/00 ;G02B7/32 ;G02B27/40 ;G03B13/20 ;G03B13/36  
MC - S02-A03B2 S02-B01 S02-B09  
DC - P81 P82 S02  
PA - (ASAH-N) ASAHI SEIMITSU KK  
IN - KOJIMA Y; SUZUKI S; TAKAYAMA H  
USAB - US5936736 The device has a polo prism (33), a focal lens system (31), an erect optical system, a focal board (35) and an eye piece system (37), which

are arranged sequentially from the object side. An optical division element (34) is stuck to the transmission surface of the polo-prism, for dividing it into several transmission surfaces.

- The division beam divided by the optical division element is drawn ahead from the polo prism by a reflecting element. An AF sensor detects the focal condition in a conjugate surface (35C) of the focal board. A focus lens drive unit (27) drives the focus lens system depending on the output of the AF sensor.

- ADVANTAGE - Reduces size of branch optical system. Simplifies structure.

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PR - JP19960283675 19961025;JP19960258481 19960930

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PN - JP10132561 A 19980522

TI - SURVEYING EQUIPMENT HAVING AF FUNCTION

AB - PROBLEM TO BE SOLVED: To avoid the enlargement of the whole surveying equipment by forming one of reflecting surfaces of a POR constituting an erect optical system of a semi-transmitting surface, sticking an optical splitting element thereto, and introducing a split luminous flux forward to detect the focused state by an AF (automatic focus) sensor.

- SOLUTION: An intended luminous flux incident from an objective lens 15 is transmitted by a dichroic prism 13 to image an erect actual image on or around a reticle 35 through a focus lens 31 and a POR 33. The reticle 35 has a ranging mark which forms a target for emitting a ranging light, and the azimuth or elevation of a collimator is regulated so that the intended subject is situated within the ranging mark. On an optical path branched by a light splitting prism 34, an AF sensor 41 for detecting the focal state in a conjugate plane 35C conjugate with the reticle 35 is provided, and its light received signal is outputted to a focal state arithmetic part 42. For the movement control of the focus lens 31, automatic focus or distance-priority focus mode is selectable, and an optional movement by a manual focus device 28 can be also adapted.

I - G01C3/06 ;G01C5/00 ;G02B7/32 ;G03B13/36

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